



DOCKET NO.: 192286US0PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :
Bernd BRUCHMANN et al : GROUP ART UNIT: 1711
SERIAL NO.: 09/581,560 : EXAMINER: R. Sergeant
FILED: July 17, 2000 :

RECEIVED
OCT 31 2002
TC 1700

FOR: DIISOCYANATES WITH ALLOPHANATE GROUPS
DERIVED FROM ALICYCLIC ALCOHOLS

DECLARATION 37 C.F.R. §1.132

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Now comes BERND BRUCHMANN who deposes and says that:

1) I am employed by BASF Aktiengesellschaft and am familiar with the present application.

2) In 19⁸⁸ I graduated from THE UNIVERSITY OF CLAUSTRAL with a
PHD (degree) IN CHEMISTRY.

3) Since 19⁸⁸ I have been employed by BASF where I have been engaged as a researcher in the study of REACTIVE POLYMERS.

4) I have read the Official Action dated May 21, 2002 from the U.S. Patent Office and the Wolff et al '207 patent cited therein, or have an understanding of the subject matter of these documents.

5) That in order to demonstrate that the claimed subject matter of the present invention with respect to a diisocyanate mixture is not obvious over the Wolff et al patent, and in particular

Comp. Ex IX of the patent, the following comparative evidence is submitted.

Table 1 below shows viscosity data and NCO content data of the embodiments of diisocyanate mixtures of the present specification identified as Experiments 1 and 3 of Table 1 and Comp. Ex. IX of Table II which employs cyclohexanol as a reactant in the preparation of the polyisocyanate of Wolff et al. The table also shows the viscosities of the isocyanates as measured at 23° C and NCO group contents as measured.

Table 1

	Product 1	Product 2	Comp. Product
Composition	HDI + 5 mol % Cyclohexanol, (see Exper. 1 of the present application)	HDI + 15 mol % Cyclohexanol, (see Exper. 3 of the present application)	HDI + 2 mol % Cyclohexanol, (see Comp.Ex. IX, U.S. Patent 5,369,207)
Viscosity (25° C) as disclosed	1220 mPas	890 mPas	1200 mPas (25° C)
Viscosity (23° C) as measured	1160 mPas	870 mPas	1290 mPas
NCO content as disclosed	20.7 %	18.3 %	22.2 %
NCO content as measured	20.6 %	18.2 %	21.8 %

Surface coating formulations were prepared as shown in Table 2 of the present specification using diisocyanate Products 1 and 2 of the invention based on Experiments 1 and 3 of the application, a Comp. Product based on the polyisocyanate (IX) of Table II of the Wolff et al patent and the conventional coating composition known as BASONAT HI 100 of comparison Example 1 of Table 2 of the specification. The coating hardness data after 5 hours of hardening and after 7 days/ 15 hours of hardening obtained for the coatings are shown in Table

2 below.

Table 2

	Product 1	Product 2	Comp Product (5,369,207)	Standard BASONAT HI 100
Polyisocyanate	Exper 1	Exper 2	Comp Ex IX	HI 100
Alcohol	Cyclohexanol			-
Hydroxy acrylate	H 136	H 136	H 136	H 136
Coating hardness Pendulum attenuation, Konig (swings)				
after 5 hr	15	13	14	15
after 7 d RT + 15 h 60° C	140	145	137	139

6) It is believed that the data of Table 1 above clearly demonstrate the lower and different viscosities of the two polyisocyanate materials of the present invention in comparison to the polyisocyanate material of Comp. Ex IX of the Wolff et al patent, as well as the lesser NCO group content data of the two polyisocyanates of the present invention versus the NCO group content of the polyisocyanate material of Comp. Ex IX of the Wolff et al patent. The significance of the differences between the contrasted polyisocyanates of Table 1 as they impact the properties of coatings prepared from these polyisocyanates is shown by the hardness data for coatings in Table 2 above where superior hardness is obtained for the two embodiments within the scope of the invention versus the polyisocyanate embodiment of Wolff et al. The results obtained are believed to be of commercial significance.

7) The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

8) Further, deponent saith not.

Date: Oct. 15th 2002

A handwritten signature in dark ink, appearing to be "Gu D.", written over a horizontal line.

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